

Title (en)

SEMICONDUCTOR DIFFERENTIAL AMPLIFIER HAVING FEEDBACK BIAS CONTROL FOR STABILIZATION.

Title (de)

HALBLEITER-DIFFERENTIALVERSTÄRKER MIT RÜCKKOPPLUNGS-VORSPANNUNGSREGELUNG ZUR STABILISIERUNG.

Title (fr)

AMPLIFICATEUR DIFFERENTIEL SEMI-CONDUCTEUR AYANT UNE COMMANDE DE POLARISATION DE REACTION POUR LA STABILISATION.

Publication

EP 0023506 A1 19810211 (EN)

Application

EP 80900335 A 19800825

Priority

US 1073779 A 19790209

Abstract (en)

[origin: WO8001747A1] An MOS differential amplifier includes a pair of substantially identical branches, each branch having a signal input MOS transistor (M1, M3) feeding a separate MOS load transistor (M5, M7). Both branches are supplied current by a single current-source MOS transistor (M10). In order to stabilize the (source-to-drain) bias voltages of the signal input and load transistors against fluctuations caused by semiconductor wafer-to-wafer processing variations, an auxiliary amplifier branch (M2, M4) is added (for sensing the bias voltage) together with a feedback loop (M8) to the current-source (for controlling the current in response to the sensing of the bias voltage).

Abstract (fr)

Un amplificateur differentiel MOS comprend une paire de branches sensiblement identiques, chaque branche ayant un transistor MOS d'entree de signaux M1, M3 alimentant separement un transistor de charge MOS (M5, M7). Les deux branches sont alimentees en courant par un transistor MOS de source a courant unique (M10). De maniere a stabiliser les tensions de polarisation (source a debit) des transistors d'entree de signaux et de charges contre les fluctuations dues aux variations de traitement de tranche-a-tranche semi-conducteur, on ajoute une branche d'amplification auxiliaire M2, M4 (pour detecter la tension de polarisation) avec une boucle de reaction M8 a la source de courant (pour commander le courant en reponse a la detection de la tension de polarisation).

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IPC 8 full level

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